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MEETINGS

The seven hundred and twenty-eighth Meeting of the Club was held at Sevenoaks on Saturday, 31 May 1980, commencing at 11.40 a.m.

Those participating were:—

Members—B. GRAY (*Chairman*), J. K. ADAMS, Mrs. D. M. BRADLEY, D. GRIFFIN, Dr. P. F. HARRISON, P. HOGG, J. PARKER and R. E. F. PEAL.

Guests — Miss M. BARRY, M. COATH, Dr. D. L. HARRISON, Mrs. P. HOGG, Mrs. R. E. F. PEAL and Miss R. THORPE.

In the morning there was a visit to the Harrison Zoological Museum in which Dr. D. L. Harrison showed the Club the fine collection of mounted specimens and some of the very large collection of unmounted skins. A buffet lunch, kindly provided by Mrs. R. E. F. Peal at 2 Chestnut Lane, followed and the afternoon was spent at the reserve established by the late Dr. J. G. Harrison on gravel pits at Sevenoaks. Here, Dr. P. F. Harrison, assisted by Mr. M. Coath, conducted the party, explaining the development of the area as a Wildfowl Refuge, and a number of interesting species were seen. It rained in the morning but the afternoon was dry and the Meeting ended about 5 p.m.

The seven hundred and twenty-ninth Meeting of the Club was held in the Senior Common Room, South Side, Imperial College, London, S.W.7 on Tuesday, 8 July 1980 at 7 p.m. The attendance was 22 members and 19 guests.

Members present were:— D. R. CALDER (*Chairman*), J. K. ADAMS, Mrs. S. VERE BENSON, K. F. BETTON, Mrs. D. M. BRADLEY, R. D. CHANCELLOR, P. CONDER, S. CRAMP, R. A. N. CROUCHER, A. GIBBS, B. GRAY, D. GRIFFIN, P. HOGG, P. A. D. HOLLON, Rev. G. K. McCULLOCH, J. PARKER, R. E. F. PEAL, E. M. RAYNOR, P. S. REDMAN, S. A. H. STATHAM, A. VITTEY, C. E. WHEELER.

Guests present were:— F. B. S. ANTRAM, Miss M. BARRY, Miss S. N. CONDER, Miss S. P. F. DIXON, E. F. J. GARCIA, R. A. HUME, A. M. HUTSON, Mrs. C. INSKIPP, T. P. INSKIPP, J. KING, G. P. McCULLOCH, Mrs. I. M. McCULLOCH, BILL ODDIE, T. PARMENTER, Mrs. R. E. F. PEAL, Miss E. V. PILCHER, RICHARD PORTER, Mrs. B. W. V. VITTEY, W. H. N. WILKINSON.

Mr. Richard Porter spoke on "Raptor migration in Europe and the Middle East" and illustrated his address with many excellent slides. He dealt primarily with raptors that need thermals on migration to Africa and also with other soaring birds migrating thither. He gave numbers of the various species observed crossing in autumn the Straits of Gibraltar, the Bosphorus and the Pontus mountains near the east end of the Black Sea respectively; he discussed the timing and origin of these birds and their routes onward.

Diet and subspeciation in the Gentoo Penguin

Pygoscelis papua

by A. J. Williams

Received 28 November 1979

Pygoscelis penguins — Gentoo *P. papua*, Adélie *P. adeliae*, and Chinstrap *P. antarctica* — have their centre of distribution in the Scotia Arc region, where, on the belt of islands from the Antarctic Peninsula to the South Sandwich Islands (approximately 56°–65°S), all 3 species breed sympatrically (Watson 1975). These islands fringe seas which contain the greatest concentrations of

euphausiid crustaceans in the southern hemisphere and euphausiids predominate in the diet of all three *Pygoscelis* penguins in the Scotia Arc region (Bagshawe 1938, White & Conroy 1975, Trivelpiece *et al.* in prep.). Gentoo Penguins, largest of the *Pygoscelis* penguins, take the largest individual euphausiids (Trivelpiece *et al.* in prep.).

Within the Subantarctic – roughly the zone between areas covered by pack ice in winter and the subtropical convergence – Adélie and Chinstrap Penguins are scarce, with only small breeding populations at a few localities, but the Gentoo Penguin is widespread and breeds at most island groups (Watson 1975). Within this zone the few available reports suggest that fish is more important in the diet of Gentoo Penguins than krill (Murphy 1936, Ealey 1954, pers. obs.). At South Georgia, where krill predominate in the diet during the entire breeding season (from November to February), there is in February a significant increase in the amount of fish taken by Gentoo Penguins and the ability to catch fish may be critical in the occasional years when krill swarms fail to appear in inshore waters (Croxall & Prince in press). If, as seems likely, larger body size in penguins is correlated with ability to dive to greater depths, then Gentoo Penguins should be able to dive and feed at greater depths than other *Pygoscelis* penguins, which may account for the greater frequency of fish, including benthic species, in their diet when compared with the diet of Adélie and Chinstrap Penguins (White & Conroy 1975, Croxall & Prince 1980, Trivelpiece *et al.* in prep.).

Two subspecies of Gentoo Penguin are currently recognised: *P. p. ellsworthi* which breeds in the Scotia Arc region, and nominate *papua* which breeds further north on Subantarctic islands including South Georgia (Murphy 1947, Stonehouse 1970). Normally – following Bergmann's rule – high latitude taxa have larger bodies but reduced extremities compared with related taxa at lower latitudes. In the Gentoo Penguin however the high latitude subspecies *ellsworthi* is smaller and has proportionately longer feet and flippers than the low latitude *papua* (Stonehouse 1970). This anomaly may be explained if, in areas where krill are often or occasionally scarce, Gentoo Penguins have developed a larger body size in response to the need to take more fish. That a change from a predominantly krill diet to one in which fish predominate may be important in producing subspeciation in the Gentoo Penguin is supported by the difference in the size and shape of the bill in the two subspecies. The bill of *ellsworthi* is terminally slender and has a small culmenicorn and resembles the bill of the essentially krill-feeding Chinstrap Penguin; the bill of nominate *papua* is longer, terminally broad and has a large culmenicorn and more nearly resembles the bill of *Spheniscus* penguins which feed largely upon fish (Murphy 1947: Fig. 1).

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A small breeding colony of the Rock Pratincole *Glareola nuchalis liberiae* in Togo

by Robert A. Cheke

Received 12 December 1979

There are 2 recognised races of the Rock Pratincole *Glareola nuchalis*. *G. n. nuchalis*, which has a white nuchal collar, occurs in eastern, central and southern Africa and its range meets that of the western race *G. n. liberiae*, distinguished by its rufous collar, in Cameroon (White 1965). Dekeyser (1951) recorded *G. n. liberiae* in Togo, but I am not aware of any documented breeding records of Rock Pratincoles in that country and little information has been published about this West African subspecies.

The colony in Togo, which I visited during the spring and early summer of 1979, was near Landa-Pozanda (9°31'N, 1°17'E) on the Kara river, southeast of Lama-Kara (9°33'N, 1°12'E). At the breeding site, the river was interrupted by an expanse of rock which stretched across the river bed, providing ample space for the birds except when the water level was very high. J. F. Walsh observed at least 8 Rock Pratincoles there on 18 April 1979, but I saw only 4 on 7 and 11 May. Five were present on 19 May and 6, all adults, on 26 May. The early morning and late evening were the usual times when the pratincoles flew to hawk for insects above the river or over the gallery forest fringing it. The crepuscular habits of the species were also noted by Brosset (1979), who associated this behaviour with diurnal variations in the timing of flights by their insect prey. When the pratincoles were feeding over the water at Landa-Pozanda they often accompanied other aerial plankton feeders such as Palm Swifts *Cypsiurus parvus*, White-rumped Swifts *Apus affinis* and Wire-tailed swallows *Hirundo smithii*; but above the trees their most common companions were Broad-billed Rollers *Eurystomus glaucurus*. During much of the day the pratincoles stood inactive on the rocks but when it was very hot they often squatted in crevices, frequently "gaping".

On 26 May a greeting display was observed after one bird returned from a flight and landed facing another adult bird. On landing, the newcomer immediately crouched submissively and uttered a trilling call while its mate stretched its body upwards so that its head was almost vertically above its feet. The birds then reversed these positions; while the arriving bird raised its head up again and stretched its neck to the vertical, so that its body profile was much more attenuated than usual, the other bird crouched by